percentage in equivalents of blocking agent which deblocks first at 110°C

percentage in equivalents of blocking agent which deblocks last at 110°C

is greater than 4/3, with the proviso that, when a blocking agent comprises a phenol functional group as blocking functional group, it does not comprise a COOH functional group and that, when the polyisocyanate composition comprises more than two blocking groups and one of the agents represents a five-membered nitrogenous heterocycle, the composition comprises more than 30 equivalent % of blocking agents reacting with the isocyanate functional group via the OH functional group.

A composition comprising isocyanates at least partially blocked, by at least two different blocking agents as defined in claim 20, wherein said ratio D is greater than 1.5.

A composition comprising isocyanates at least partially blocked by at least two different blocking agents as defined in claim 20, wherein said ratio D is greater than 2.

The composition of claim 20, wherein the ratio of the blocking groups is between 10/90 and 90/10.

The composition of claim 20, wherein one of the blocking agents is a substituted or unsubstituted (poly)nitrogenous heterocyclic compound.

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The composition of claim 20, wherein the ratio of the blocking groups is between 20/80 and 80/20.

The composition of claim 20, wherein one of the blocking agents is selected from the group consisting of pyrazole, triazole and pyridine, optionally substituted.

The composition of claim 26, wherein one of the blocking agents is triazole, optionally substituted.

The composition of claim 20, wherein one of the two blocking agents is an oxime.

The composition of claim 20, wherein one of the blocking agents is an oxime selected from the group consisting of methyl ethyl ketoxime, acetone oxime, methyl amyl ketoxime, the oxime of methyl pyruvate and the oxime of ethyl pyruvate.

The composition of claim 20, wherein said blocking agents are selected from the pairs:

- triazole/methyl ethyl ketoxime,



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- triazole oxime of ethyl pyruvate,
- dimethylpyrazole/methyl amyl ketoxime,
- hydroxypyridine/methyl amyl ketoxime, and
- dimethylpyrazole/hydroxypyridine.
- The composition of claim 20, comprising a mixture of compounds bearing blocked isocyanate functional group(s), wherein said compounds exhibit a mean functionality (number of blocked or nonblocked isocyanate functional groups per molecule comprising them) of greater than 2, and at most equal to 5.
- The composition of claim 20, comprising a mixture of compounds bearing blocked isocyanate functional group(s), wherein said compounds exhibit a mean functionality (number of blocked or nonblocked isocyanate functional groups per molecule comprising them) at least equal to 2.1, and at most equal to 4.
- The composition of claim 20, comprising a mixture of compounds bearing blocked isocyanate functional group(s) wherein said compounds exhibit a mean functionality (number of blocked or nonblocked isocyanate functional group per molecule comprising them) at least equal to 2.4.
- The composition of claim 29, comprising a mixture of compounds bearing blocked isocyanate functional group(s) wherein said compounds exhibit a mean



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functionality (number of blocked or nonblocked isocyanate functional group per molecule comprising them) at most equal to 3.7.

The composition of claim 20, comprising a mixture of compounds bearing blocked isocyanate functional group(s), wherein compounds bearing isocyanate functional groups fulfill at least one of the following conditions:

- at least one third of the free or blocked NCO functional groups are connected to a hydrocarbonaceous backbone via a saturated (sp³) carbon;

- at least one third of said saturated (sp³) carbons carry at least one;
- at least one third of said saturated (sp³) carbons are connected to said backbone via a carbon atom itself bearing at least one hydrogen.

A kit for the preparation of a coating, comprising, for successive or simultaneous addition, a composition of claim 20 and a coreactant comprising a reactive hydrogen.

The kit of claim 30, for the preparation of a paint.

35. A process for the preparation of a composition, comprising the step of reacting a (poly)isocyanate composition, successively or simultaneously, with at least two different blocking agents, one of the blocking agents reacting with the isocyanate functional group via an OH group and the other reacting with the isocyanate functional group via an



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NN group or the two blocking agents reacting with the isocyanate functional group via an OH group, the two blocking agents having a deblocking temperature of between 80 and 200°C in the octanol test and being selected so that, in the octanol test at 110°C, the ratio

percentage in equivalents of blocking agent which deblocks first at 110°C

D =

percentage in equivalents of blocking agent which deblocks last at 110°C

is greater than 4/3, with the proviso that, when a blocking agent comprises a phenol functional group as blocking functional group, it does not comprise a COOH functional group and that, when the polyisocyanate composition comprises more than two blocking groups and one of the agents represents a five-membered nitrogenous heterocycle, the composition comprises more than 30 equivalent % of blocking agents reacting with the isocyanate functional group via the OH functional group.

3 A process for the preparation of coating polymers, comprising the following steps:

- bringing together the composition of claim 26 and a coreactant which comprises derivatives exhibiting reactive hydrogens; and
- heating the reaction mixture thus formed to a temperature which allows crosslinking of the isocyanate groups of compounds with said coreactant.--